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PM USA Operations

1993-1997

Five Year Plan

STRATEGIES

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PHILIP MORRIS U.S.A.

INTER-OFFICE CORRESPONDENCE

Richmond, Virginia

To: **Distribution** **Date: July 24, 1992**

From: **Operations Planning**

Subject: **Up Front Strategic Direction - Strategy Team Proposals**

Information contained in the attached Strategy Book is intended to provide a perspective on currently proposed business strategies in order to stimulate your thinking as you make preparations for your 1993-1997 Five Year Plan.

As an integral part of our 1993-1997 planning process, Strategy Teams were formed to develop business strategies in critical areas of Operations. These teams have completed their work and have produced a set of strategies to satisfy the following objectives:

- Identify the business issues affecting Operations
- Review current objectives and prescribe new ones as needed
- Establish business strategies consistent with PM USA objectives
- Provide the basis for major Operations programs

We are very pleased with this process to date, and believe that the results represent a marked improvement in the level of strategy direction available for use in preparing five year plans at the factory and support unit level versus previous years.

The Strategy Teams presented their proposals to the manufacturing management group for review and discussion during a two-day session in early June. The Planning department has incorporated into the attached document the results of the Strategy Teams' presentations along with information from the General Managers' Quality meeting on July 1st, and Cost of Manufacturing meetings on July 7th and 8th.

Please bear in mind that these proposals have yet to be reviewed with the Operations Management Council. Summary presentations will be given to the OMC on July 27th, and based on their input, USA Operations' strategies will be presented to Mr. Campbell in mid-August . Information from each of those meetings will be promptly distributed.

The Strategy Team Leaders are invited to share this Strategy Book with their Team Members as they deem appropriate.

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Philip Morris USA
1993-1997

CONTENTS

PRODUCT DEVELOPMENT A-1

CAPACITY - FLEXIBILITY B-1

COST - MANUFACTURING C-1

COST - TOBACCO UTILIZATION D-1

COST - LEAF PROCUREMENT E-1

COST - DIRECT MATERIALS F-1

CONTINUOUS IMPROVEMENT G-1

QUALITY H-1

ENVIRONMENTAL PROTECTION J-1

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PRODUCT DEVELOPMENT

INTRODUCTION

To maximize the potential of our business, it is imperative that we consider all aspects of that which we provide to the marketplace. We therefore must expand our working understanding of our products to:

> "That which Philip Morris provides to existing and potential customers and consumers worldwide. This includes the physical cigarettes, packaging, and promotions acting as a system, as well as their influence on consumers' past experiences and future expectations of our products before, during, and after use. Operations has the role of developing, manufacturing, and distributing these at the lowest cost and highest quality and value by category in the industry."

Encompassed in this definition are cigarettes (includes blends, flavors, filter), packaging, promotions, export leaf blends, export cut filler, and export flavors.

The process of product development therefore must facilitate all elements of changes to the "product" family. Changes to the product family encompass existing brand evolution, line extensions, and the introduction of new stand alone brands. Product changes can be driven by both ***Operations*** objectives and ***Marketplace*** factors.

ISSUES

Continuing pressures to meet corporate income objectives have mandated that Operations accelerate efforts to take costs out of all products, as well as increase their profit potential without compromising product integrity. In addition, we will be continually challenged by increasing environmental and regulatory pressures with respect to the manufacture of our products on a worldwide basis

To meet PM USA's volume, share, and income objectives as well as PMI's business objectives, we must become more adept at generating and implementing new product and promotional concepts to maintain the consumer's interest in all of our products, with emphasis on adding value to full margin. In addition, we will be continually challenged by increasing environmental and regulatory pressures concerning our marketed products.

MAJOR STRATEGIES

To effectively meet the corporate goals of PM USA and PMI we must embrace the following strategies for product development:

Operations Driven

1. Ensure the continued integrity of **existing products** as we strive to reduce costs and increase quality.

Marketplace Driven

2. Improve the generation, capture, evaluation, and execution of **new product** ideas (cycle time) while minimizing costs of development and execution.

Organization/Skills

3. Identify the best organizational structure to reduce cycle time and maximize the number of successful ideas in the pipeline. Additionally, we must identify the resources and continually

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PRODUCT DEVELOPMENT

develop the skills within the organization to address the product as a system, which includes all elements of cigarette packaging and promotion.

STRATEGY #1 - ENSURE THE CONTINUED INTEGRITY OF EXISTING PRODUCTS AS WE STRIVE TO REDUCE COSTS AND INCREASE QUALITY.

1. To support continuous improvement initiatives on cost and quality we must develop knowledge of all "product" technologies to respond/generate/implement opportunities quickly. Study of each of these technologies must include extensive understanding of machine/process interactions. Specific areas for improvement are:

   - Small run printing
   - Ink ingredients
   - Improved film protection
   - Elimination of packaging adhesives
   - Development of adhesive specifications

2. Develop/improve physical, analytical, and consumer testing methodologies to enable Operations to predict consumer responses allowing for improved decisiveness and a reduction in evaluation time.

   - Develop methodology and knowledge base of "importance to consumer" for application in decision making
   - Enhance ability to cope with worldwide testing requirements

3. Improve the process and scope for development of specifications/standards to ensure they:

   - Address machine/material capabilities and interfaces
   - Define tolerances considering acceptability to consumers and operations capabilities.
   - Address all aspects of our "product"

4. Develop and maintain plans on a brand by brand basis which delineate scheduled product changes.

STRATEGY #2 - IMPROVE THE GENERATION, CAPTURE, EVALUATION, AND EXECUTION OF NEW PRODUCT IDEAS (CYCLE TIME) WHILE MINIMIZING COSTS OF DEVELOPMENT AND EXECUTION.

1. Define and formalize the process for the generation, capture, and evaluation of new product and promotional concepts for PM USA and PMI that are linked to consumer desires and enhanced product value.

   - Identify and integrate key functional contributors:
     - Utilize PM USA New Product Steering Committee
     - Develop PMI New Product Team
   - Establish guidelines for concept prioritization, evaluation, and selection
   - Monitor and evaluate impact of environmental and regulatory activities
   - Monitor and evaluate impact of competitive activities

2. Develop technologies required to support new, added-value product concepts, to defend against competitive pressures, and to meet potential changes in environmental and regulatory requirements. Specific areas for improvement are:

   - High efficiency filtration

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PRODUCT DEVELOPMENT

- Printing capabilities
- Aluminum packaging
- New film concepts
- Menthol
- Laser systems
- New package concepts

3. Streamline the commercialization process to enable Operations to manufacture and distribute new products and promotions at an accelerated rate (minimum of one major program/quarter)

- Prioritize new product introductions
- Clearly define roles and responsibilities of functions supporting product commercialization
- Develop and concentrate skills and knowledge base to address product development as a system to include filters, cigarettes, packaging, and promotions.
- Utilize International Product Change Management System

STRATEGY #3 - IDENTIFY THE BEST ORGANIZATIONAL STRUCTURE TO REDUCE CYCLE TIME AND MAXIMIZE THE NUMBER OF SUCCESSFUL IDEAS IN THE PIPELINE. ADDITIONALLY, WE MUST IDENTIFY THE RESOURCES AND CONTINUALLY DEVELOP THE SKILLS WITHIN THE ORGANIZATION TO ADDRESS THE PRODUCT AS A SYSTEM, WHICH INCLUDES ALL ELEMENTS OF CIGARETTE PACKAGING AND PROMOTION.

1. Short term: continue to utilize the Product Integration Team, the Packaging Innovation Task Force, the R&D Restructuring Committee, the PM USA New Product Steering Committee, and Bi-weekly New Brands Meetings.

2. Longer Term: Establish "Operations-Marketing Project Teams", and restructure.

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CAPACITY/FLEXIBILITY

KEY ISSUES

When compared with the 1992-1996 Plan, current sales trends, both for the domestic and export markets, are slowing. However, brand proliferation is continuing and the surge in price value, as manifested in 1991 and 1992, is expected to hold throughout the plan period.

Subsequently, capacity in itself is not a critical issue anymore. The main focus of the 1993-1997 Plan will be how to produce most efficiently while meeting the increasing flexibility requirements. Critical decisions have to be made on the number of factories to operate, on alternative ways to source production, and on factory work schedules that may be different from current schemes. Central in all this will be the strategy towards Cabarrus: do we expand or not and, if so, when and how.

MAJOR STRATEGIES

Develop a flexible manufacturing capacity which is optimally sourced and provides the basis for cost and quality leadership by product category.

1. Establish and implement the optimum manufacturing capacity and production sourcing scenario.

2. Improve forecasting of sales/shipments and enhance its interaction with production planning.

STRATEGY #1 - ESTABLISH AND IMPLEMENT THE OPTIMUM MANUFACTURING CAPACITY AND PRODUCTION SOURCING SCENARIO.

TACTICS/INITIATIVES

1. Capacity Sourcing

Following the presentation of the Strategy Team, a cross-functional group is enhancing (and detailing) the work presented. A number of different capacity and sourcing scenarios are being worked on and costed out. Recommendations will be provided to the OMC by October of this year.

2. Process/Equipment Responsiveness

Improve process and equipment responsiveness to provide faster new brand introductions and reduced changeover impact and factory disruption.

- Consolidate like equipment, both to a factory location and within a factory. Facilitate the consolidation process through synergies with PM International's need for older generation equipment.

- Develop and maintain a pool of reserve equipment fully rebuilt, with fewer size dependent parts, to allow for maximum responsiveness for new brand introductions and shifts in marketplace demands.

- Pursue new generations of equipment and re-engineering of existing equipment to facilitate brand/size changes.

- Evaluate to separate a facility for new brand introductions, machinery evaluations and manning complement studies.

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CAPACITY/FLEXIBILITY

3. Labor Flexibility

Improve manning flexibility to meet variable production requirements.

- Pursue, through negotiations, the flexibility to implement alternative work schedules.
- Pursue, through negotiations, the flexibility to temporarily furlough employees, providing extended leave with partial pay on short notice.
- Pursue, through negotiations, the elimination of brand scheduling practices between and within plants regarding partial and overtime production.
- Evaluate current negotiations format/cycle to address changing business needs.

STRATEGY #2 - IMPROVE FORECASTING OF SALES/SHIPMENTS AND ENHANCE ITS INTERACTION WITH PRODUCTION PLANNING.

TACTICS/INITIATIVES

1. Integrated Sales Forecasting Process for PM USA

Implement recommendations by Anderson Consulting.

- Establish centralized forecasting functions in New York dedicated to Operations.
- Generate sales forecasts for Operations independent of financial/budget objectives.
- Develop a sales forecast system, integrated on account level.

2. Integrated Promotional Activity Management System

- Develop a separate (demand) forecast of promotional products.
- Create a daily/weekly activity schedule of PreCon.
- Integrate PreCon schedule into weekly Planning system.

3. Low Volume Domestic Brands

Develop guidelines for the production/inventory management of low volume domestic brands.

- Establish volume cut-off criteria.
- Establish forecasting, purchasing and production frequency.
- Quantify risks/rewards

4. Export Production: Stock Versus Order

Re-evaluate the potential and need of producing on stock for export product.

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COST - MANUFACTURING

INTRODUCTION

PM USA is facing increasing pressures on profitability growth, primarily due to volume gains in the lower margin price value and generic segments. This margin pressure is further aggravated by an increased proliferation of brands and product packings driven by export and domestic market segmentation. To counter this trend, PM USA must continue to aggressively develop ways to lower the costs of manufacturing in order to meet the company's profit and cash flow targets.

Total volume increases over the plan period are projected to slow versus that experienced over previous years. This will minimize economies of scale and expose any fixed cost increases. In addition the proliferation of packings and new product variations lead to smaller production runs which result in increased changeovers and smaller purchasing quantities. Because our manufacturing processes have historically been designed to efficiently produce large runs, this trend could lead to higher manufacturing costs.

PM USA Operations will counter these trends and lower its manufacturing costs over the Plan period by focusing on technologies, flexible production processes, streamlining the organizational structure, continuous improvement initiatives, and by carefully analyzing the major cost elements throughout each production facility and developing and implementing action plans to address each.

KEY ISSUES

Operations has been challenged to become the low cost producer by product category in the domestic industry. To achieve this will require controlling manufacturing cost increases to a rate that is below inflation. All elements of both fixed and variable costs will have to be managed aggressively.

Manufacturing must lower the cost of tobacco components and direct materials along with labor and machinery costs. These reductions in expenses are required while at the same time our mission to produce the highest quality cigarettes within a safety conscious environment remains intact.

Continued diversity in brands, blends and components coupled with an ongoing shift towards technological innovation requires an increasingly skilled and technologically competent work force. Training alone will not meet these challenges. A work force motivated, empowered and held accountable for results is required. Labor agreements to permit increased flexibility are also a key issue.

MAJOR STRATEGIES

By focusing on the four M's, man, machine, methods, and materials, Manufacturing will reduce costs throughout the factories. Every step of the manufacturing environment will be evaluated and changes made to ensure our objective of becoming the low cost producer is met.

Manufacturing has identified key areas that will provide opportunities for cost reductions. Within each of these areas, strategies will be developed and action plans and programs implemented to ensure we execute effectively.

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COST - MANUFACTURING

1. Manning. Designing and implementing a new organization structure that can reduce or eliminate unnecessary layers of salaried and hourly employees will be accomplished during the plan period.

2. Machinery. Improvements in maintenance procedures and the implementation of new technologies is critical to ensure that production efficiencies continue to improve, thus driving down production costs.

3. Methods. Innovative approaches to management processes in each facility must be evaluated including total quality management and self directed work teams. In addition a well trained employee is a requirement to meet our advanced requirements.

4. Materials. Reducing materials waste and the associated costs is a clear opportunity for the reduction of expenses.

STRATEGY #1 - MANNING. DESIGNING A NEW ORGANIZATION THAT CAN REDUCE OR ELIMINATE UNNECESSARY LAYERS OF MANAGEMENT AND HOURLY EMPLOYEES IS A TOP PRIORITY.

TACTICS/INITIATIVES

1. Organization Design (Headcount Reductions - Salaried) - A redesign of the management organization structure will be undertaken to eliminated unnecessary levels of supervision. The original focus will be on the group supervisor position with later focus to be placed on support functions.

2. Headcount Reductions - Hourly - Reductions in manning throughout the manufacturing processes will be pursued. Plant modernization projects will also provide opportunities for reduced staffing and the associated conversion costs.

3. Reduce Overtime Expense. In each production facility the reduction or elimination of overtime pay will be pursued for both salaried and hourly employees.

STRATEGY #2 - MACHINERY. IMPROVEMENTS IN MAINTENANCE PROCEDURES AND THE IMPLEMENTATION OF NEW TECHNOLOGIES IS CRITICAL TO ENSURE THAT PRODUCTION EFFICIENCIES CONTINUE TO IMPROVE, THUS DRIVING DOWN PRODUCTION COSTS.

TACTICS/INITIATIVES

1. Maintenance Organization. A new maintenance and engineering organization in each plant will be established, headed by a chief engineer. It will manage all maintenance functions and factory specific engineering needs. This group will become the factory technology base capable of identifying, planning and implementation technology applications.

2. Maintenance Practices. Additional maintenance responsibilities will be transferred from fixers to operators and highly skilled and specialized maintenance crews formed who will report to production management. In addition, all manufacturing facilities will adopt a planned preventive maintenance program in cigarette manufacturing.

3. Spare Parts. An enhanced tracking system will be developed as well as an accurate system for capturing the true cost of spare parts. Failure analysis of returned parts will be introduced.

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COST - MANUFACTURING

4. Technology. We will continue to implement cost effective technologies to reducing costs, and improving flexibility, including working closely with machinery vendors to take advantage of the latest technological solutions. This may include soft pack, flip top box, and single cigarette vision systems, automatic circumference controls, Primary processing lab systems, and trouble call maintenance support systems.

5. Reduce Charcoal Brands Conversion Costs. Innovative means of improving our production capabilities for charcoal brands will be pursued including automatic plug delivery, charcoal reclamation, reductions in charcoal volumes in the filter, single cigarette vision systems, and high speed Lark charcoal inserters.

6. York. Refurbish as an alternative to rebuild will be implemented.

STRATEGY #3 - METHODS. INNOVATIVE APPROACHES TO MANAGEMENT PROCESSES IN EACH FACILITY MUST BE EVALUATED INCLUDING TOTAL QUALITY MANAGEMENT AND SELF DIRECTED WORK TEAMS. IN ADDITION A WELL TRAINED EMPLOYEE IS A REQUIREMENT TO MEET OUR ADVANCED REQUIREMENTS.

TACTICS/INITIATIVES

1. Cost Center Accountability. All manufacturing facilities are to become true cost centers with the General Manager having full cost responsibility/accountability.

2. Innovative Management. Total Quality Management (TQM) and Self Directed Work Teams (SDT) are proven concepts that can improve operating results. We will evaluate these processes for implementation during the plan period.

3. Training. Comprehensive training both for salaried and hourly employees is a core requirement. SAT will be used to formalize our investment in training. With the reduction in supervisory levels, training will shift from task training towards management skills training.

4. Factory Utilization. We have the ability to identify and act upon the variance in module utilizations. We will focus on module by module performance variances and utilize our knowledge in order to improve module utilizations consistently throughout the plant.

5. Reduce Changeover Costs. Small brands are increasing and the related multiple changeovers increase our costs. To counter this trend, we will standardize specifications, improve scheduling, enhance case packing flexibility, and develop an activity based accounting system.

6. Labor Agreements. The potential for reducing the cycle time for labor agreements will be aggressively pursued to provide an improved ability to respond quickly to our evolving market.

7. Labor Flexibility. Various approaches to enhance the current work schedule will be explored. This includes six-day schedule/seven-day language, Monday start-ups, 18-minute coverage for unscheduled absences, fast flow delivery, outsourcing of tasks, etc.

8. Performance Management. A "good" performance evaluation system is needed to be based upon business objectives which will link evaluation, compensation and development. Pay for performance concepts are contemplated.

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COST - MANUFACTURING

STRATEGY #4 - MATERIALS. REDUCING MATERIALS WASTE AND THE ASSOCIATED COST IS A CLEAR OPPORTUNITY FOR THE REDUCTION OF EXPENSES.

TACTICS/INITIATIVES

1. HID/CID Systems. We will re-evaluate the present systems and develop or implement changes.

2. Supply on Demand. The potential for reducing costs by expanding the supply on demand concept throughout the plants will be fully evaluated.

3. Waste Reduction Initiative. Begun in 1992, this focused approach to identifying the core reasons leading to material waste and developing solutions, will be expanded and implemented in each of our facilities.

4. Module Accountability. Tracking material waste to specific modules is required to close in on the core reasons for module variability in material wastage. It is also consistent with our approach to improve accountability throughout the facility.

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COST - TOBACCO UTILIZATION

INTRODUCTION

Tobacco accounts for 40% of product costs. Reduction of leaf usage is therefore a critical part of our objective to establish significant and sustained reductions in cost. Optimization of current practices and technologies will not do the job. Breakthrough technologies and innovative approaches have to be developed in the area of tobacco utilization to establish a competitive edge in product cost.

KEY ISSUES

Over the long haul, availability of tobacco components is not in proportion with current usage levels (as an example, PM USA is over-utilizing scrap). As a consequence, significant deviations from total utilization in a large blend family will require off-setting modifications in other blend families.

In light of the above, integrated management of the whole chain of tobacco processing becomes critically important. Maximization of leaf usage has to be approached from a total tobacco utilization point of view, encompassing all the steps from green leaf threshing up to cigarette manufacturing. This will require development of business systems and tools, capturing the whole chain of tobacco processing.

Our vision as to the appropriate tobacco processing capacity and flexibility for the next ten years needs to be defined. This has to be considered not only in view of (cigarette) volume developments but also with respect to our strategies to reduce leaf usage as discussed in this chapter.

MAJOR STRATEGIES

Significant and sustained reductions in leaf usage are needed to establish a competitive edge in product cost. Our single, most important objective is to be able, by the end of the Plan period, to improve cigarette yield by 25%.

1. Provide, by 1997, the technology and blend strategy, to improve cigarette yield by 25%.
2. Implement total utilization on a global basis.
3. Develop and provide the appropriate tobacco processing capacity and flexibility.
4. Establish business systems and practices to manage the whole tobacco processing chain in an integrated fashion.

STRATEGY #1 - PROVIDE, BY 1997, THE TECHNOLOGY AND BLEND STRATEGY TO IMPROVE CIGARETTE YIELD BY 25%.

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COST - TOBACCO UTILIZATION

Opportunities to Achieve 25% Yield Improvement		
Incr	**Cum**	**Initiative**
2.3	2.3	New primary process for price value
11.2	13.5	New primary process for full margin
1.35	1.35	NET for DIET in all full margin, except Marlboro. Increase inclusion with 3%. Shutdown 3rd shift-MC DIET Plant
2.0	3.35	Above scenario, but retain 3rd shift-MC. Adjust blends accordingly
3.4	6.75	Eliminate DIET, NET in all full margin brands. Increase inclusion rate with 3%
4.7	4.75	All other initiatives
	25.0	Total Yield Improvement

TACTICS/INITIATIVES

1. New Primary Process (NPP)

NPP is targeting cigarette yield improvements in Primary by improving tobacco yield and filling value. The focus is on component optimization, including continuous in-line expansion. Maker feeding, hopper and maker development are also included to assure Primary benefits are reflected in the cigarette. The program is initially targeted at price value. Spinoffs (retrofits) applicable to the full-margin business, including Marlboro, are expected and, as shown above, are critical to attain our yield improvement strategy.

After review of different site alternatives, the R&D Semiworks has been selected to develop the new Primary Process.

2. NET

Filling value and yield improvements will result from NET. NET yields are expected to be approximately 5% better than DIET. The improvement will occur both in the NET process and in the cigarette factories as a result of fewer fines.

Filling value improvement will depend upon the utilization strategy, which will be primarily subjectively driven. Its contribution to cigarette yield will be a function of the NET, cigarette blends and expansion conditions. Based upon work to date, the impact on overall cigarette yield can be estimated, as shown in the above three scenarios. The third scenario, the complete elimination of DIET in the full margin, requires additional capital expenditures for NET capacity expansion. The first two scenarios are based on full utilization of the three-shift Bermuda NET plant, which is planned for production beginning fourth quarter 1993.

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COST - TOBACCO UTILIZATION

3. New BL

Yield improvements will result from the introduction of new BL, due to its better survivability. However, the overall effect on cigarette yield will be modest as BL represents less than 7% of the blend.

4. Stemming Fundamentals

Establishment of the fundamental know-how and understanding of stemming for PM on a worldwide basis through the use of a separate small-scale stemming facility is a key strategy. Elements of this program are:

- To provide common baselines for stemming yield and quality in order to monitor performance of contract stemmeries. Knowledge of offshore strip yield will also enhance our negotiation position for offshore leaf prices, which is sold on a strip basis.
- To improve overall cigarette yields as a function of enhancements of the stemming process, such as separation of leaf components, alternate equipment and processing technology, etc.
- To provide a training facility to maintain PM stemming expertise.

5. Stemming Discard Recovery

The technology to recover four to six million pounds of tobacco dust from stemmery discards is being qualified. This may require cigarette formula changes to account for increased sheet availability.

6. Optimum Making Moisture

Fundamental investigation is recommended to determine the optimum making moisture in relation to cigarette yield.

7. Europe

Determine the filling value and yield improvements resulting from full utilization of European feedstock and changes in their stemming specifications.

STRATEGY #2 - IMPLEMENT TOTAL UTILIZATION ON A GLOBAL BASIS INCLUDING ENTITLEMENTS.

TACTICS/INITIATIVES

1. In the short term, implement blend adjustments as product mix begins to affect total utilization.
2. In the long term, design blends based upon sustaining total utilization.
3. Total utilization should not limit our ability to take full advantage of "deals".

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COST - TOBACCO UTILIZATION

4 Maximize OTM deliveries from the European factories.

5 Purchase "entitlements" when buying offshore and pool strip.

STRATEGY #3 - DEVELOP AND PROVIDE THE APPROPRIATE TOBACCO PROCESSING CAPACITY AND FLEXIBILITY.

TACTICS/INITIATIVES

1. Develop the new Primary process to provide sufficient flexible primary capacity.

2. Reduce investment cost for flexibility by concentrating price value, small volume and non-DBC production, as much as possible, to a single facility.

3. Consolidate blends where possible.

4. Evaluate the economics for cast leaf and additional NET capacity.

STRATEGY #4 - ESTABLISH BUSINESS SYSTEMS AND PRACTICES TO MANAGE THE WHOLE TOBACCO PROCESSING CHANGE IN AN INTEGRATED FASHION.

TACTICS/INITIATIVES

1. Develop/Modify and integrate systems and databases.

   - Interact cigarette physical model with cigarette smoke model. This performance model will provide the methodology to adjust target weight as a function of blend modifications while maintaining subjectives.

   - Enhance the existing leaf model with a cigarette yield and OTM performance model and improve its response time.

   - Modify the current plant leaf yield system into a true cigarette yield system (in order to avoid sub-optimizing tobacco yield). Evaluate dry weight basis approach.

   - Design a brand allocation model to optimize primary capacity and decrease blend mix related costs.

2. Expand TLA in order to predict impact of grade substitutions on cigarette physicals.

3. Develop fundamental relationships between input tobacco, process equipment/conditions and output product quality on final cigarette performance. Use pilot facilities (Cast Leaf/RL, DIET/NET, Stemmery) and Semiworks.

4. Re-examine current responsibilities and accountabilities in the total arena of tobacco utilization. Implement an organizational approach which will assure integrated tobacco utilization management.

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COST - LEAF PROCUREMENT

INTRODUCTION

Philip Morris' Corporate leaf purchases amount to approximately $2.1 billion/year or some 700 million pounds strip. Key facts are:

(Data Based on 1992 Projected Lbs)

By Type		By Origin	
Flue Cured	48%	USA	52%
Burley	37%	Brazil	16%
Oriental	15%	Turkey	9%
		Greece	3%
		Other Countries	20%

By PM Affiliate		By Dealer	
PM USA	58%	ULT	65%
PM Europe	27%	Dibrell	8%
PM Other	15%	Standard	6%
		Austin/Monk	3%
		# Other Dealers	18%

By Marketing System	
57%	Auction System - green leaf purchases - USA/Canada/Zimbabwe/Malawi
43%	No Auction - strip purchases - 22 countries

KEY ISSUES

Leaf procurement needs to be managed on a corporate basis. Although purchasing strategies are coordinated in major markets, the full potential of PM's global purchasing power may further be enhanced and human resource utilization be optimized.

Tobacco blends for corporate products can vary by country of manufacture/sale due to external as well as internal constraints (legal, political, consumer preference, cost, etc.). The potential to optimize product quality and/or corporate net income is difficult to be assessed requiring appropriate simulation tools and documentation of significant parameters.

Prices for domestic compared to offshore leaf are significantly higher. RJR and B&W utilize approximately 15% offshore (flue cured and burley) versus 10% for PM USA impacting our cost competitiveness. A major shift towards higher offshore usage would require careful planning to assure offshore tobacco availability at current pricing levels. The impact on our business stemming from negative reaction by the US tobacco farming community is difficult to forecast.

Potential added value blend concepts, all US-filler only, could materially impact leaf sourcing, the total utilization concept, plant capacities/utilizations and cost. This subject is beyond the scope of leaf procurement and requires definition, if pursued, in the PM USA business plan.

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COST - LEAF PROCUREMENT

Issues relating to tobacco utilization and the relative value of various tobacco components are covered under the section, Tobacco Utilization.

MAJOR STRATEGIES

To fully maximize the corporation's volume and net income potential, PM USA is committed to manage the resource tobacco pursuing the following strategies.

1. Source, procure and utilize tobacco on a corporate basis in order to optimize product quality and/or corporate net income.
2. Define and optimize dealer alliances worldwide.
3. Maximize synergies of Philip Morris' worldwide leaf purchasing organizations.
4. Remove the US political barriers that inhibit the cost effective procurement and use of leaf tobacco.

STRATEGY #1 - SOURCE, PROCURE AND UTILIZE TOBACCO ON A WORLDWIDE BASIS.

TACTICS/INITIATIVES

1. Capture tobacco availability/pricing and PM demand on a worldwide basis
   - Implement a tobacco sampling plan worldwide
   - Integrate TLA Analysis (physical, chemical, subjective properties) worldwide
   - Develop a common grading system
   - Develop a computer system to consolidate all data
2. Manage tobacco sourcing and procurement on a worldwide basis
   - Develop sourcing and procurement strategies globally, by PM affiliate and by source
   - Procure leaf on a corporate basis
   - Review leaf durations worldwide
3. Utilize leaf on a corporate basis
   - Define external and/or internal blend constraints (legal, political, subjective, etc.)
   - Update corporate blend guidelines for corporate/international products
   - Identify changes to leaf sourcing/blend concepts that would enhance corporate net income
   - Increase offshore usage domestically to match competition
   - Substitute offshore tobaccos by lower cost offshore tobaccos (Brazil versus China)

2022950005

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

COST - LEAF PROCUREMENT

STRATEGY #2 - OPTIMIZE DEALER ALLIANCES WORLDWIDE

TACTICS/INITIATIVES

1. Develop strategies for dealer alliances worldwide and by country defining potential benefits
2. Reduce/Eliminate local dealers (benefit analysis)
3. Negotiate reduction in total expenditures

STRATEGY #3 - MAXIMIZE THE SYNERGIES OF PHILIP MORRIS' WORLDWIDE LEAF PURCHASING ORGANIZATIONS

1. Align/Optimize leaf organizations worldwide
2. Allocate procurement responsibility/accountability by market and by PM affiliate
3. Improve cross training and development

STRATEGY #4 - REMOVE THE US POLITICAL BARRIERS THAT INHIBIT THE COST EFFECTIVE PROCUREMENT OF LEAF TOBACCO

TACTICS/INITIATIVES

1. Stabilize demand/purchase fluctuations year to year of US leaf in conjunction with the increase offshore usage strategy (evaluate political benefit versus increased cost from higher durations)
2. Develop a program with Corporate Affairs to counter the offshore usage strategy
   - Cost competitiveness domestically
   - Cost competitiveness on exports primarily for opportunity business (US manufacturing jobs)

2022950006

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

COST - DIRECT MATERIALS

INTRODUCTION

In addition to the manufacturing cost initiatives within the factories, we must continue to aggressively pursue opportunities to reduce the costs of all of our direct materials. Innovative approaches to direct material purchases must be developed to optimize purchasing practices and to exploit synergy opportunities within Philip Morris Companies.

KEY ISSUES

The potential for direct material cost pressures related to the introduction of new products with unique, higher cost components, has never been greater. Products introduced with higher cost components, such as BOLD and B & H rounded corners continue to escalate to take advantage of market opportunities. The need to effectively manage these introductions and to search for means to control the component costs is a top priority.

Adapting our business strategies to respond more effectively and cost efficiently to a changing product portfolio will be a continuing challenge during the plan period. This includes not only our ability to respond to smaller production runs within the factories but also to purchase and ship in smaller quantities on a cost effective basis. Innovative and responsive business systems to address this changing environment are a necessity.

MAJOR STRATEGIES

To continually reduce costs throughout the direct materials cycle we will pursue the following strategies:

1. Pursue a strategic approach to purchasing, procuring direct materials on a global basis, leveraging the size of Philip Morris Companies through a limited number of supplier partners.

2. Reduce inventory handling and and carrying costs through fast flow deliveries and management of obsolescence.

3. Reduce the materials waste in factories through an aggressive waste initiative.

4. Consolidate/standardize specifications to improve economies of scale in both manufacturing and purchasing.

5. Develop new lower cost material substitutes

STRATEGY #1 - PURSUE A STRATEGIC APPROACH TO PURCHASING, PROCURING DIRECT MATERIALS ON A GLOBAL BASIS, LEVERAGING THE SIZE OF PHILIP MORRIS COMPANIES THROUGH A LIMITED NUMBER OF SUPPLIER PARTNERS.

TACTICS/INITIATIVES

1. Complete the supplier base reduction initiative for any given component to increase leverage, reduce variation, reduce administrative burden, and allow for effective partnering.

   - Develop a sole source for fine papers (tipping, base, cigarette paper, and plug wrap)
   - Reduce adhesives suppliers from 6 to 2-3
   - Reduce flavor suppliers from 34 to 5
   - Reduce folding carton suppliers to 2.

2022950007

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

COST - DIRECT MATERIALS

2. Evaluate/Institute practices which generate economies of scale for our suppliers and result in lower material costs.

   - Replace pre-printed cases with factory ink jetted cases
   - Optimize order sequencing for printed materials to optimize presses
   - Standardize and simplify tipping designs
   - Review and consolidate cigarette paper inks

3. In concert with supplier base reduction, establish cross-functional partnering teams with major suppliers at a rate of one per quarter. The major objective of the teams is to conceive and implement cost reduction ideas. Partners will be selected on the basis of management commitment to PM, management flexibility/creativity/aggressiveness, technology base, quality, service, and capacity.

   - Priority candidates for the plan period are Kimberly-Clark, Eastman, Somerville Packaging, IPC, and J. W. Ferguson.

4. Develop and implement synergy opportunities with sister PM Companies to take full advantage of quantity discounts on common materials.

   - Consolidate PM USA and KGF foil purchases from one source.
   - Consolidate PM USA, Kraft, and Miller purchases of corrugated materials in the southeast region.
   - Develop a joint supplier base with PME and PM USA.

5. Evaluate all in-house and out-sourced operations to ensure that the optimal costs are achieved and make changes as indicated. Current areas for study are:

   - Blend propyl paraben/PG in-house
   - Out-source tipping perforation to tipping paper printer
   - Out-source flavor blending

STRATEGY #2 - REDUCE INVENTORY HANDLING AND AND CARRYING COSTS THROUGH FAST FLOW DELIVERIES AND MANAGEMENT OF OBSOLESCENCE.

TACTICS/INITIATIVES

1. Extend implementation of fast-flow delivery to all major materials, including printed packaging, when water-based inks and on-line vision inspection are in place.

2. Work with domestic and export marketing and sales in conjunction with PP&C to sharpen forecasts and give timely decisions.

STRATEGY #3 - REDUCE THE MATERIALS WASTE IN FACTORIES THROUGH AN AGGRESSIVE WASTE INITIATIVE.

TACTICS/INITIATIVES

1. A materials waste study team has been formed targeting a potential 50% material waste reduction.

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Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

COST - DIRECT MATERIALS

STRATEGY #4 - CONSOLIDATE/STANDARDIZE SPECIFICATIONS TO IMPROVE ECONOMIES OF SCALE IN BOTH MANUFACTURING AND PURCHASING AND REDUCE MATERIALS COSTS.

TACTICS/INITIATIVES

1. Standardize the following material characteristics: foil slit width, poly slit width, tear tape, tip lap, cigarette paper lap.

2. Control cigarette deliveries with tipping.

STRATEGY #5 - DEVELOP NEW LOWER COST MATERIAL SUBSTITUTES

TACTICS/INITIATIVES

1. Develop new and/or substitute materials which contribute to greater economies of scale through common materials, reduce the number of materials required, or substitute synthetic for natural components to balance price fluctuations.

2022950009

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

CONTINUOUS IMPROVEMENT

INTRODUCTION

Philip Morris USA Operations is committed to continually strive toward optimizing the quality, innovation, and productivity of PM USA Operations through continuous learning and continuous improvement. We are making continuous learning and continuous improvement a way of life throughout Operations. This change relies on participative management where we each strive to be better tomorrow than we are today.

KEY ISSUES

- Acceptance and readiness of the organization
- Impact of resistance to the implementation of a system that requires continuous learning and improvement
- Impact of multiple methodologies used to pursue continuous improvement
- Managing the increasingly demanding short term business needs while pursuing long term improvement
- Availability of resources

MAJOR STRATEGIES

Over the next five years, our major strategies will be:

1. Minimize the negative impact of resistance to change.

2. Manage the impact of multiple methodologies used to pursue continuous improvement

3. Manage the increasingly demanding short-term business needs while pursuing long-term improvement.

4. Manage internal and external resources to accomplish tasks.

STRATEGY #1 - MINIMIZE THE NEGATIVE IMPACT OF RESISTANCE TO CHANGE.

TACTICS/INITIATIVES

1. Clear communication

2. Holding people accountable

   - Include in Performance Management

   - Include in planning process/commitments

   - Reward people accordingly

3. Use the system

   - Utilize networking to positively reinforce and implement

4. Identify, communicate, and reward successes

5. Make tough people decisions

2022950010

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

CONTINUOUS IMPROVEMENT

STRATEGY #2 - MANAGE THE IMPACT OF MULTIPLE METHODOLOGIES USED TO PURSUE CONTINUOUS IMPROVEMENT.

TACTICS/INITIATIVES

1. Charter a Continuous Learning and Improvement Steering committee consisting of representatives from major organizations. Key criteria are:

   - Operations Management Council is sponsor
   - Determine minimum commonalities necessary among all continuous learning and improvement systems
   - Develop Continuous Improvement policy and principles
   - Maintain focus
   - Recommend common measures based on Continuous Improvement
   - Function as a resource
   - Insure lessons learned
   - Review of each function's accomplishments and failures
   - Use the system. Use facilitator to train, implement, and monitor progress
   - Meet quarterly with Operations Management Council

STRATEGY #3 - MANAGE THE INCREASINGLY DEMANDING SHORT TERM BUSINESS NEEDS WHILE PURSUING LONG TERM IMPROVEMENT.

TACTICS/INITIATIVES

1. Departments should include in their implementation plan opportunities that provide early success and proof of concept thus reinforcing momentum.

2. Utilize Continuous Improvement to optimize resources.

   - analyze individual workloads
   - Manage task forces and committees effectively
   - Identify when task force goes out of business

2022950011

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

CONTINUOUS IMPROVEMENT

3. Creatively address plan for training, including time and methods. Examples include:

   - Detailed training plan
   - Train the trainer
   - Supervisor as trainer and coach
   - Just in time training

STRATEGY #4 - MANAGE INTERNAL AND EXTERNAL RESOURCES TO ACCOMPLISH TASKS.

TACTICS/INITIATIVES

1. Utilize consultants to assist in developing the process and train trainers.
2. Leverage internal resources from functions that are practicing Continuous Improvement.
3. Search for and eliminate overlap in training between existing efforts and Continuous Improvement.
4. Business plan reviews with Senior Management should include Continuous Improvement plans, including resource needs.

2022950012

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

QUALITY

INTRODUCTION

It is PM USA's plan to establish a clear competitive advantage in product quality as perceived by the consumer. To attain the position of quality leader in each product category will be a major focus for this five year plan period. Our success in the marketplace rests in our capability to continuously improve mechanisms for understanding of, and response to, consumer needs. Standards will be developed and implemented to check, monitor and continuously improve on these consumer driven needs.

KEY ISSUES

- **QUALITY OF THE MANAGEMENT PROCESS**
- **MANAGEMENT OF THE QUALITY PROCESS**
- **PRINCIPLE PRODUCT QUALITY CONCERNS**

QUALITY OF THE MANAGEMENT PROCESS

The topic of "quality of the management process" will be fully reviewed and discussed as we determine our approach to total quality management (TQM). Shown below are the major elements of strategies and tactics that will be included in our quality management approach.

MANAGEMENT OF THE QUALITY PROCESS

MAJOR STRATEGIES

The following strategies are best addressed within a "system", or quality process model which recognizes those essential elements critical to the management of quality. The "system", or process, model is illustrated on the next page.

1. QUALITY MEASUREMENT SYSTEM. Examine and evaluate current quality measures including Factory Audit, Product Audit, Competitive Audit, and domestic consumer complaints as well as international claims and customer complaints.

2. QUALITY SUPPORT ISSUES. Address quality support issues as they impact product quality performance and/or the cost of quality.

3. PRODUCT QUALITY ISSUES. Identify high priority product quality issues through marketplace based measures and "cost" impact.

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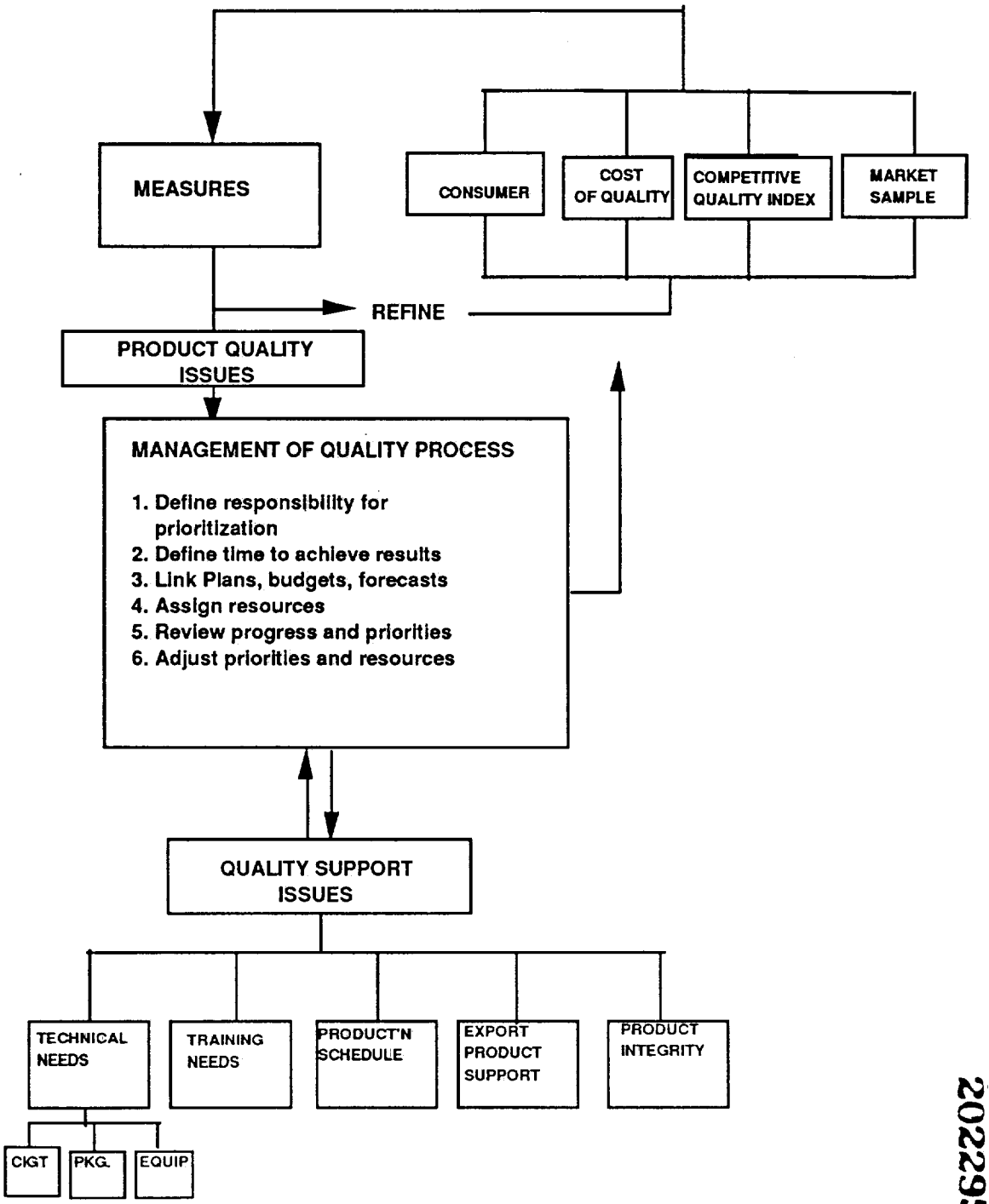
QUALITY

Quality Process Model



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QUALITY

STRATEGY #1 - QUALITY MEASUREMENT SYSTEM. Examine and evaluate current quality measures including Factory Audit, Product Audit, Competitive Audit, and domestic consumer complaints as well as international claims and customer complaints.

TACTICS/INITIATIVES

1. Refine measures to be more consistent with:
   - Consumer Expectations
   - Needs of Internal Data Users
2. Define product category implications on quality measures and reporting
3. Develop analytical methods to measure subjectives
4. Quantify the costs of:
   - Consumer Dissatisfaction
   - Manufacturing and Distribution Quality Failures
5. Develop a Competitive Quality Index (CQI)
   - Visual
   - Functional
   - Physical
   - Analytical
   - Objective Sensory Assessment
6. Short-term Actions
   - Define product categories
   - Convert current data to be viewed within the new product categories
   - Examine the significance of data
   - Look for trends
   - Develop short-term strategies by product category

STRATEGY #2 - QUALITY SUPPORT ISSUES. Address quality support issues as they impact product quality performance and/or the cost of quality.

TACTICS/INITIATIVES

1. Technology Requirements
   - Determine process performance by measuring process variability rather than defects
   - Develop 100% on-line measurement at current and anticipated speeds
   - Merge data from existing off-line quality tests and on-line process measures -- Manage based on merged "picture"
   - Develop a management process for technology selection and implementation (include vendors)
   - Develop a philosophy to address equipment proliferation including purchases, parts, training, etc.
   - Develop a system to relate strip quality to cigarette quality (stem, size, filling power)

2022950015

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

QUALITY

2. Training Needs

- Provide cross-functional education and exposure to quality and manufacturing processes
- Communicate quality requirements to First Line Supervision including specifications, good manufacturing practices, defect criteria, and SPC basics
- Establish a cross-functional group to provide quality education
- Evaluate a one year job swap: Manufacturing and Quality
- Train personnel in the use of automated data collection for a single picture of:
  - Quality
  - Cost
  - Efficiency
  - Waste, etc.

3. Production Scheduling

- Assess the impact of production scheduling on product quality.

4. Export Products Support

- Develop and audit procedures for shipping, handling, and storage of international products (flavors, EBS, ECF, filters, sheet, and cigarettes)
- Develop interfaces and systems with international customers for more thorough measurement of product performance - This includes:
  - Consumer Expectations
  - Product Quality Issues
  - Improvement Initiatives
  - Expanded Market Pick-ups

5. Product Integrity

- Establish policies based on maintaining product design characteristics in manufacturing and the field
- Provide guidelines for tracking all product elements through manufacturing, storage, and distribution
- Establish technical understanding of age/shelf live impact of intermediate and finished products
- Utilize this knowledge to establish inventory management policies and practices
- Establish quality accountability for finished product after shipment from place of manufacture to market.

STRATEGY #3 - PRODUCT QUALITY ISSUES. Identify high priority product quality issues through marketplace based measures and "cost" impact.

TACTICS/INITIATIVES

1. Define responsibility for prioritization
2. Define time to achieve results

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Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

QUALITY

3. Link plans, budgets, forecasts
4. Assign resources
5. Review progress and priorities
6. Adjust priorities and resources

PRINCIPLE PRODUCT QUALITY CONCERNS

The following section covers key product quality issues as determined by our current quality measurement system.

MAJOR PRODUCT QUALITY ISSUES

1. Taste/odor/stale
2. Torn Rod/Broken Cigarette and Filter Falls Off
3. Rod/Stem Holes
4. Pack Adhesion - Soft Pack/Flip Top Box
   Stamp Adhesion - Soft Pack
5. Loose Tobacco
6. Shortages

ISSUE #1 - Taste/Odor/Stale

TACTICS/INITIATIVES

- Establish a cross-functional team (Central QA, R&D, Manufacturing, Engineering) to review known or suspected causes of taste/odor/stale complaints and to review and direct work in progress
- Establish a consumer based "cost" for taste/odor/stale complaints
- Validate that the consumer is receiving product as originally designed
- Implement factory and distribution practices and policies for conformance to product design all the way to the consumer
- Develop analytical, objective (part of CQI), and subjective measurement tools to measure the performance of products against design characteristics

ISSUE #2 - Torn Rod/Broken Cigarette and Filter Falls Off

TACTICS/INITIATIVES

- Establish cross-functional team to review known or suspected causes and identify solutions.
- Establish a consumer based "cost" for the defects
- Implement best known practices and designs in manufacturing
- Identify alternative techniques to measure product defects that occur at low rates

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Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

QUALITY

ISSUE #3 - Rod/Stem Holes

TACTICS/INITIATIVES

- Utilize the quality process model to ascertain the real consumer awareness and "cost" of these defects
- If current level is a "true" consumer issue, pursue processing, blend formulation, and cigarette construction changes to reduce level of defects
- If the current level of defects is not a true consumer issue, determine acceptable threshold to evaluate economic potential which could result from changes in stemming and processing, blend formulation, and cigarette construction

ISSUE #4 - Pack Adhesion - Soft Pack/Flip Top Box
Stamp Adhesion - Soft Pack

TACTICS/INITIATIVES

Use the Quality Process to:

- Assess the impact on consumer satisfaction and internal costs for verification of prioritization
- If appropriate, based on consumer validation of the issue, implement defined X-2 gluer and X-1 practices to correct known causes

ISSUE #5 - Loose Tobacco
- Coal Drop off
- Firmness
- Loose Ends
- Shorts Under Film

TACTICS/INITIATIVES

- Utilize the Quality Process Model to ascertain the real consumer awareness and "cost" of these defects
- If current level is a "true" consumer issue, pursue processing, blend formulation, and cigarette construction changes to reduce level of defects
- If the current level of defects is not a true consumer issue, determine acceptable threshold to evaluate economic potential which could result from changes in stemming and processing, blend formulation, and cigarette construction

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Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

QUALITY

ISSUE #6 - Shortages

TACTICS/INITIATIVES

- Designate a cross-functional team led by manufacturing (must include production, Engineering, Factory QA, Central QA) to establish causes of shortages as reported by customers and consumers. This must include an assessment of equipment, maintenance and use practices, and reporting procedures.
- Revise the reporting methods for shortages to provide the information, as required, to the cross-functional team in a timely manner.
- Create a mechanism and the necessary tools to ensure that the shortage issue is dealt with through the quality management process.

2022950019

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

INTRODUCTION

Increasingly restrictive environmental regulations affect the manufacturing process in ways that directly impact the design and marketing of our products. Our Environmental Protection strategy is structured to comply with existing laws, to anticipate current risks and evolving restrictions, and to guide business decisions to minimize our impact on the environment and to maintain manufacturing flexibility in a cost effective manner to meet corporate goals.

For the 1993-1997 plan period, emphasis will continue to shift from the end of pipe control of pollutants to source reduction, with particular attention to the areas of solid waste and recycling. This area has its greatest impact on packaging and packaging materials. We will have to be more creative in our packaging concepts, such as incorporating recycled materials and weight reduced packaging in order to comply with legislation, which may otherwise limit our ability to market our products or increase the cost to the consumer.

Another key area of concern is ensuring our ability to manufacture products in the most cost effective manner. It will become increasingly important to factor operational flexibility into the permit process to ensure that we meet our legal requirements, at the lowest manufacturing costs, without constraining the manufacturing facilities.

KEY ISSUES

Solid waste generated by our manufacturing process, and the solid waste which must be disposed of post-manufacturing will undergo a major increase in regulation over the next five years. The need to use recycled materials, to use materials that are easily recycled after use, and the need to reduce the quantity of solid waste sent to the landfills will drive several of our programs during the plan period. In addition, the lack of uniformity around the world on how solid waste disposal issues are addressed imposes additional restrictions upon the design of our packaging and the manner in which we manufacture our products.

Increased scrutiny by regulatory authorities, increasingly restrictive regulations on manufacturing processes, and higher permitting and usage fees will require that we evaluate every product and its manufacturing process for its environmental impact. This new focus in the way we conduct our business will determine our action plans in such areas as air pollution, water pollution, solid waste disposal, and employee training and awareness. Although each of these major programs have the potential for significant adverse impact on the cost of our product, with proper advance planning and program actions, we can convert this into a cost advantage in the marketplace and contribute to the corporate objective of being the lowest cost manufacturer.

MAJOR STRATEGIES

Over the next five years, our major strategies will be:

1. To maintain our compliance with existing regulations on water, air, solid waste and hazardous waste, while ensuring minimum cost impact.

2. To implement comprehensive plans which focus on reducing or preventing the generation of pollutants to meet new and anticipated regulations.

3. To minimize solid waste and hazardous waste through recycling and source reduction to achieve at our manufacturing operations a recycle potential of 65% for mixed waste and 50% for process waste by 1995.

2022950020

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

4. To assess the environmental impact of the manufacturing process and the environmental impact of our packaging system on our customer.

5. To establish sources of environmental information to increase our awareness and effectiveness regarding all levels of legislation as it pertains to the environment, and to assess the potential impact of PM USA.

6. To institute an an environmental awareness and training program for our employees and the public on environmental issues.

STRATEGY #1 - TO MAINTAIN OUR COMPLIANCE WITH EXISTING REGULATIONS ON WATER, AIR, SOLID WASTE AND HAZARDOUS WASTE, WHILE ENSURING MINIMUM COST IMPACT.

OBJECTIVE (1):

To ensure continued compliance with the regulations utilizing good operating procedures and new technology where applicable.

TACTICS/INITIATIVES

1. Review the permitting requirements of all PM USA factories, both those for National Pollutant Discharge Elimination System (NPDES) permits where we directly discharge into a body of water and where we discharge to publicly owned waste treatment works (POTWs). Review Federal EPA and State water quality criteria and maintain compliance.

2. Review present and proposed regulations regarding POTWs and institute technology in our factories to reduce impact and cost.

3. Establish procedures to prevent pollution due to from above ground storage tanks.

4. Review Virginia Surface Water Management Area Regulation and establish as necessary the procedures and requirements to be followed in connection with the establishment of surface water management areas, as it directly affects our operations at Park 500. This regulation will result in the issuance of surface water withdrawal permits and certificates to allow the use of water withdrawn directly from the James River for use in our processes.

5. Expand plans for the control of discharge of toxic substances such as hexavalent chrome, silver and ammonia.

6. Avoid stormwater permitting by installing necessary equipment and by instituting various housekeeping practices.

7. Review the requirements for air emissions at waste water treatment facilities. Identify and quantify the organic vapors emitted from waste water treatment facilities.

8. Review the EPA's revised regulations for the Spill Prevention and Countermeasures Plan and establish action plans to achieve compliance.

2022950021

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

OBJECTIVE (2):

Comply with all mandated air emissions regulations and proposed legislation while continuing to ensure our ability to maintain operations in a flexible and cost effective manner.

TACTICS/INITIATIVES

1. Obtain baseline information from existing processes emissions.
2. Maintain the permitting function to allow for flexible operations and sufficient lead time for obtaining permit approval.
3. Develop process changes and evaluate new technologies to reduce releases into the atmosphere with emphasis on the following items: carbon dioxide (CO2), oxides of nitrogen (NOx), ammonia, volatile organic compounds (VOCs), sulfur dioxide (SO2), menthol, volatile flavors, nicotine, and particulates.
4. Develop alternative methods and controls to achieve a pest-free environment for our operations and for our incoming raw materials.
5. Maintain the safe and secure use of chlorofluorocarbons (CFCs) without reducing the effectiveness of the CFC consuming systems such as refrigeration equipment and fire suppression systems.

STRATEGY #2 - TO IMPLEMENT COMPREHENSIVE PLANS WHICH FOCUS ON REDUCING OR PREVENTING THE GENERATION OF POLLUTANTS TO MEET NEW AND ANTICIPATED REGULATIONS.

OBJECTIVE:

Investigate the economic impact and feasibility of pollution abatement systems. Include evaluations of systems to control fugitive emissions, as well as specific equipment such as incinerators, scrubbers and biological processes.

TACTICS/INITIATIVES

1. Qualify existing technologies and identify emerging technologies to improve abatement and reduce cost utilizing process optimization to minimize potential abatement equipment required and evaluate secondary waste streams of abatement equipment.
2. Develop new technologies (chemical, biological, physical or others) for pollution control.

STRATEGY #3 - TO MINIMIZE SOLID WASTE AND HAZARDOUS WASTE THROUGH RECYCLING AND SOURCE REDUCTION TO ACHIEVE AT OUR MANUFACTURING OPERATIONS A RECYCLE POTENTIAL OF 65% FOR MIXED WASTE AND 50% FOR PROCESS WASTE BY 1995.

2022950022

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

OBJECTIVE:

Integrate solid waste management throughout the company to reduce landfilling by source reduction and recycling, increase use of recycled or reusable supplies and materials, and anticipate, evaluate emerging state and federal solid waste/recycling regulations.

TACTICS/INITIATIVES

1. Establish a coordinated approach for ensuring that solid waste issues are addressed in the planning of manufacturing processes, and materials packaging and distribution.
2. Identify and assess all materials currently disposed of in landfills and source reduction wherever possible.
3. Identify and evaluate all administrative and manufacturing materials and supplies that could be recycled or contain recycled materials and increase their purchase and use.
4. Encourage and support, when practical, the development of new markets for materials containing recycled materials.
5. Utilizing existing data collection systems, track the disposition of all waste and the amount of recycled materials in use throughout the organization.
6. Evaluate the purchase of materials and supplies in bulk containers rather than individual or smaller forms of packaging.
7. Investigate the need for and incorporate if appropriate the recycling of materials generated by the sales force.

STRATEGY #4 - TO ASSESS THE ENVIRONMENTAL IMPACT OF THE MANUFACTURING PROCESS AND THE ENVIRONMENTAL IMPACT OF OUR PACKAGING SYSTEM ON OUR CUSTOMER.

OBJECTIVE (1):

Research and evaluate packaging materials consistent with producing quality products while meeting the existing and proposed packaging legislation such as the Resource Conservation and Recovery Act (RCRA) and the Coalition of Northeast Governors (CONEG) recycling and packaging weight reduction regulations which could become effective as early as 1995.

TACTICS/INITIATIVES

1. Utilize the solid waste task force and trade associations to highlight state issues on packaging and packaging bans.
2. Develop and utilize to the maximum extent possible packaging that contains weight reduced and recycled materials.
3. Develop packaging systems (e.g., cartons and cases) that use increased levels of recycled materials and would not affect the subjective qualities of the product.
4. Evaluate alternatives to the foil coated paper pack liner.

2022950023

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

OBJECTIVE (2):

Evaluate potential new processes or products for environmental impact before implementation.

TACTICS/INITIATIVES

1. For new processes which replace existing ones, obtain baseline information for the new processes and compare the data with that from the existing processes.

2. For new processes which result in new products, obtain baseline information, identify possible manufacturing sites, and determine if it will be in compliance with environmental regulations.

3. Incorporate an environmental review into the early stages of all development programs for new product development. The review should test for compliance with existing environmental laws and anticipate requirements that may be mandated by legislation.

4. Minimize the need for pollution control equipment by incorporating source reduction and conservation of materials and energy into the process/product development.

STRATEGY #5 - TO ESTABLISH SOURCES OF ENVIRONMENTAL INFORMATION TO INCREASE OUR AWARENESS AND EFFECTIVENESS REGARDING ALL LEVELS OF LEGISLATION AS IT PERTAINS TO THE ENVIRONMENT, AND TO ASSESS THE POTENTIAL IMPACT OF PM USA.

OBJECTIVE:

Review Federal Environmental Protection Agency (EPA) analytical methods for pollutant identification and qualification to determine their applicability to tobacco processes. Develop modifications to EPA standard methods, as necessary, to achieve reliable information characterizing environmental discharges. Stay current with existing and proposed local, state, federal and international regulations and be proactive and influence the promulgation of the regulations where possible.

TACTICS/INITIATIVES

1. Determine if EPA approved analytical methods available accurately measure specific pollutants for the tobacco industry.

2. Develop methods to accurately measure specific pollutants if such are not already available.

3. Stay current with pending regulations and communicate throughout the organization, including Corporate Affairs, Government Affairs, and Company's and continue our involvement in organizations which influence the regulatory process such as the Grocery Manufacturers Association, Organizational Resource Councillors, State Advisory committees and others.

4. Set up and maintain an information network with other industries, PM companies and other sources and produce a periodical bulletin.

2022950024

Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000

ENVIRONMENTAL PROTECTION

STRATEGY #6 - TO INSTITUTE AN ENVIRONMENTAL AWARENESS AND TRAINING PROGRAM FOR OUR EMPLOYEES AND THE PUBLIC ON ENVIRONMENTAL ISSUES.

OBJECTIVE:

Comply with all mandated by the United States Environmental Protection Agency (EPA) and the United States Department of Transportation (DOT) training and improve the environmental knowledge base and awareness throughout the entire organization to ensure good management practices.

TACTICS/INITIATIVES

1. Provide training at all levels of the organization based on a training master plan that identified all mandated training, both initial refresher and frequency of training; and specific facilities, jobs and numbers of employees affected.

2. Standardize all training for consistency throughout the organization.

3. Increase awareness of all employees in air, water, solid waste and packaging issues through the use of existing employee communications (e.g., *Richmond Report, Target Vision...*).

4. Encourage and acknowledge employee involvement in community environmental activities (e.g., recycling).

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Source: https://www.industrydocuments.ucsf.edu/docs/nnkm0000